Product brief

StrongIRFET™ power MOSFET 75 V family

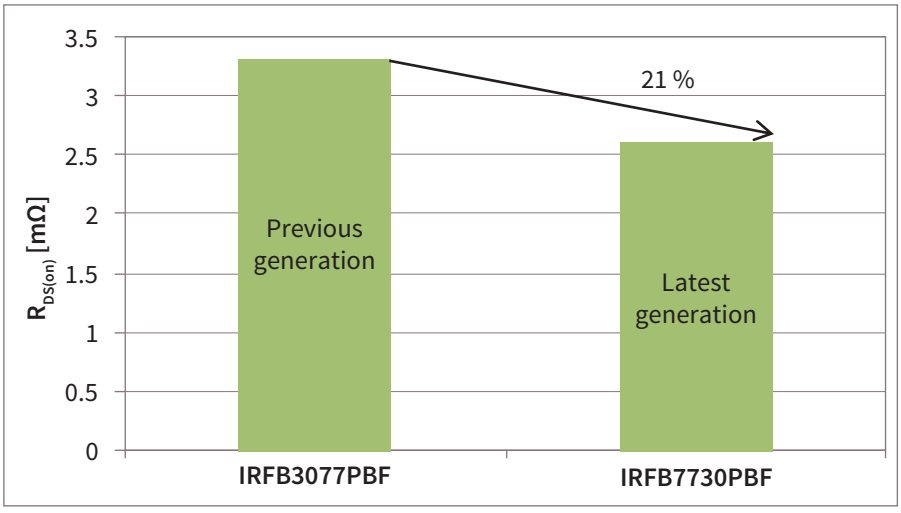
Low $R_{DS(on)}$, high current technology capable for industrial applications

Infineon introduces an extension of the successful StrongIRFET™ family in 75 V devices for applications including industrial drives, consumer drives, light electric vehicles (LEV), DC drives, battery powered circuits and inverters.

The new family of StrongIRFET™ 75 V power MOSFETs features low on-state resistance ($R_{DS(on)}$) suitable for low frequency applications, high-current carrying capability, soft body diode, and 3 V typical threshold voltage to improve noise immunity. Each device in the family is 100 percent avalanche tested at industry highest avalanche current levels to ensure the most robust solution for demanding industrial applications.

The IRFB7730PbF in D^2PAK for e.g. features a 21 percent improvement in $R_{DS(on)}$ compared to previous generation in the same package.

$R_{DS(on)}$ comparison between two generations



Key features and benefits

- Designed for industrial applications
- High-current carrying capability
- Low $R_{DS(on)}$ to reduce system conduction losses
- Wide portfolio to address the needs of various applications
- Industry standard footprint to accommodate legacy designs
- Softer body diode improved performance in low frequency applications
- 3 V typical threshold voltage to improve noise immunity
- 175°C junction temperature rated

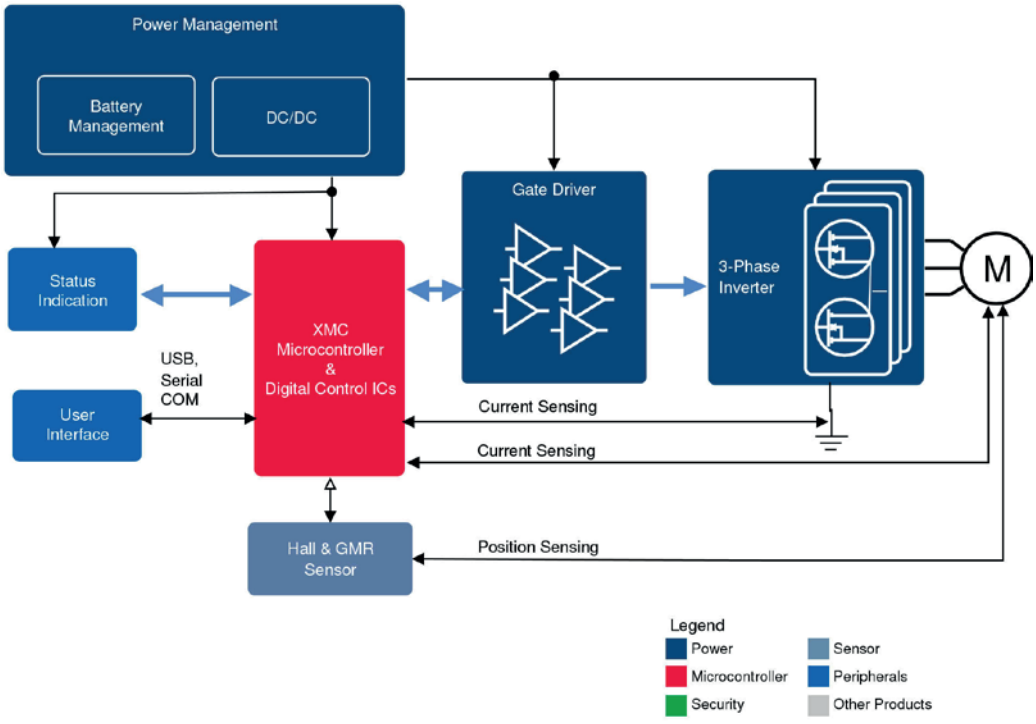
Applications

- Industrial drives
- Consumer drives
- Light electric vehicles
- DC drives
- Inverters
- Battery powered circuits

StrongIRFET™ 75 V product portfolio

$R_{DS(on)\ max}$ @V_{GS}=10V [mΩ]	TO-252 (DPAK)	TO-263 (D^2PAK)	TO-263 (D^2PAK 7pin)	SuperSO8 / PQFN 5x6	DirectFET™	TO-220	TO-247
1-2							IRFP7718PBF 1.8 mΩ
2-4		IRFS7730TRLPBF 2.6 mΩ	IRFS7730TRL7PP 2.6 mΩ			IRFB7730PBF 2.6 mΩ	
		IRFS7734TRLPBF 3.5 mΩ	IRFS7734TRL7PP 3.5 mΩ			IRFB7734PBF 3.5 mΩ	
4-10		IRFS7762TRLPBF 6.7 mΩ			IRF7780MTRPBF 5.7 mΩ		
	IRFR7740TRPBF 7.2 mΩ						
						IRFB7740PBF 7.3 mΩ	
				IRFH7787TRPBF 8.0 mΩ			
		IRFS7787TRPBF 8.4 mΩ				IRFB7787PBF 8.4 mΩ	
>10						IRFB7746PBF 10.6 mΩ	
						IRFR7746TRPBF 11.2 mΩ	

A typical brushless DC (BLDC) block diagrams for battery powered applications



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